

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Rec'd PCT/PTO 15 FEB 2005

PCT/DE2003/002693



Applicant's or agent's file reference ACDPA5151PWO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DE2003/002693	International filing date (day/month/year) 07 August 2003 (07.08.2003)	Priority date (day/month/year) 16 August 2002 (16.08.2002)
International Patent Classification (IPC) or national classification and IPC G06F 17/60		
Applicant DEUTSCHE POST AG		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 11 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 11 March 2004 (11.03.2004)	Date of completion of this report 22 November 2004 (22.11.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE2003/002693

I. Basis of the report

1. With regard to the elements of the international application:*

☐ the international application as originally filed

☒ the description:

pages 1,2,4-20, as originally filed
pages _____, filed with the demand
pages 3,3a,3b, filed with the letter of 14 September 2004 (14.09.2004)

☒ the claims:

pages _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages 1-7, filed with the letter of 12 November 2004 (12.11.2004)

☒ the drawings:

pages 1/20-20/20, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
☐ the claims, Nos. _____
☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE2003/002693

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 5-7

because:

☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 5-7
are so unclear that no meaningful opinion could be formed (*specify*):

See supplemental sheet.

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/DE 03/02693

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: BOXES I and III.1

BOX I

Basis of the report

1. Prior art

This report makes reference to the following documents (D1-D5):

- D1: FAERBER, GEORG: "Prozessrechentechnik, Kapitel 2" 1979, SPRINGER VERLAG, BERLIN, HEIDELBERG, NEW YORK, XP002269579
- D2: US-A-5 051 914 (SCHUMACHER KARL H ET AL) 24 September 1991 (1991-09-24)
- D3: US-A-5 068 797 (SCHUMACHER KARL H ET AL) 26 November 1991 (1991-11-26)
- D4: US-A-5 072 401 (SCHUMACHER KARL H ET AL) 10 December 1991 (1991-12-10)
- D5: WO 96/20952 A (LUCAS RICHARD BRENT; EII KONSULTER (SE)) 11 July 1996 (1996-07-11)

BOX III.1

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

2. Clarity

Claim 5 is not clear. For further explanations, see Box VII, points 6.3 and 6.4 of this international preliminary examination report. It is therefore not possible to examine this claim and its dependent claims, claims 6 and 7.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/DE 03/02693

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-7	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-7	NO
Industrial applicability (IA)	Claims	1-7	YES
	Claims		NO

2. Citations and explanations

3. Novelty

3.1 Professional knowledge

Document D1 is a handbook; its contents are considered known to a person skilled in the art. D1 discloses:

a computer system comprising a processor and external events: "processes on the processing side (...) require a reaction from the processor. The process triggers a warning at the processor, enabling it to react as required by the situation." (D1, page 19, lines 28-32).

Moreover, D1 discloses that the events are specific and that the warning triggered by these events is also "subjected at first to a warning analysis in order to identify a warning among a plurality of warnings" (D1, page 20, lines 1-3).

D1 also states that the processor develops control data "which are output during the next step as a reaction of the processor to the process warning."

(D1, page 20, lines 5-7)

D1 also discloses that the "processor normally (processes) a plurality of processes simultaneously" (page 21, last paragraph, first line).

D1 depicts in figure 5, in particular, a closed system comprising data acquisition, the processing of control instructions and control operations. The controlled machine is an NC machine, but D1 explicitly presents it only as an example.

Consequently, D1 discloses a process for transmitting data for example between an NC machine and a central data processing unit (processor) in order to operate one or more NC machines, events occurring at the machine being determined by means of a communication system (measurement sensor and coupling electronics) of the NC machine and being associated by the communication system with function invocations which are transmitted to the data processing unit, which carries out the functions which correspond to the events and if necessary sends data back to the communication system.

3.2 The differences between claim 1 and the disclosure of D1 are:

- U1) the known system is used with a parcel mailbox installation, rather than with an NC machine;
- U2) the function invocations are combined into a request which is then transmitted to the central data processing unit; and
- U3) the functions are carried out depending on the transport or delivery company or user

concerned by the event in question.

3.3 In view of these differences, the subject matter of claim 1 is unknown from the prior art and hence novel (PCT Article 33(2)).

3.4 The same reasoned statement applies to all the claims that are dependent on claim 1.

4. Inventive step

The combination of features U1-U3 does not have an additional or surprising effect; the application thus does not concern a combination invention. It is therefore possible to consider the three differences individually when assessing inventive step.

The plausible technical problems

4.1 The following first plausible technical problem can be deduced from difference U1:

P1: the use of the known system for transmitting data between a parcel mailbox installation and a central data processing unit.

However, D1 discloses on page 19, lines 16-20, that "all subjects discussed in this book, (...) should not only be considered in relationship with large computer systems, but also as methods which in the future will increasingly constitute important design aids in all technical fields."

A person skilled in the art would therefore apply the known technology to a parcel mailbox

installation system having a central data processing unit and would thus solve the problem P1. The difference U1 therefore cannot substantiate an inventive step.

- 4.2 The following plausible technical problem can be derived from difference U2:

P2: "how to transmit electronic messages efficiently over a network"

Document D4, entitled "Optimizing Mail Delivery Systems By Logistic Planning", would be considered by a person skilled in the art seeking for solutions to the problem P2, and already discloses in its abstract that messages or mail can be combined into "batches" in order to increase handling efficiency. Figure 5 of D4 shows that these messages can also be e-mail messages, i.e. electronic digital data transmission processed in batches.

A person skilled in the art would therefore solve the problem P2 by applying the teaching of document D4. The difference U2 thus cannot substantiate an inventive step either.

- 4.3 The claimed feature that the function is carried out depending on a transport or delivery company or user concerned by the event cannot substantiate an inventive step. Since the description of the application always represents the function invocations as function names with parameters, the "transport or delivery company" and the "user" are only two possible parameters. The application does not specify anywhere how these data and their

processing influence the claimed communication process. They are cognitive data (by contrast with functional data) which, according to the decision T1194/97, "Philips", of the Chamber of Appeal of the European Patent Office, should not be considered a technical feature. Consequently, this type of data cannot substantiate an inventive step (according to the decision T0641/00, "Comvik"). Nor can a technical problem be derived from this difference. In conclusion:

P3: (no problem).

Where there is no problem no inventive step is required to solve a problem.

4.4 None of the differences or their combination substantiates an inventive step. All the problems would be solved by a person skilled in the art who would thus arrive at the claimed subject matter. The totality of the claim therefore also fails to involve an inventive step (PCT Article 33(3)).

4.5 Further claims

The fetching or depositing of mail and the determination of whether a time limit has elapsed are not technical features in the field of communications (which is the only field claimed): transmitted information represents only cognitive data which cannot substantiate an inventive step (cf. point 4.4 above). Claims 2 and 3 therefore do not involve an inventive step (PCT Article 33(3)).

Providing a data packet with an unequivocal

identification is an absolutely normal procedure in communication protocols. This was also the case before the priority date. Claim 4 therefore also fails to involve an inventive step (PCT Article 33(3)).

5. Industrial applicability

The invention is industrially applicable.

BOX VII

Certain defects in the international application

6. Clarity (PCT Article 6)

6.1 The additional subjects of claims 2 and 3 are mutually exclusive. Claim 3 therefore cannot refer back to claim 2; claim 3 can refer back only to claim 1.

For the same reason, none of the following claims can refer back to a plurality of preceding claims; they can refer back to precisely one preceding claim only (cf. claims 4 and 6).

6.2 Claims 2 and 3 relate to events at a parcel mailbox installation. This suggests that there are a plurality of parcel mailbox installations which would all fall under the wording of claims 2 and 3.

Both claims refer back to claim 1, which describes a plurality of parcel mailbox installations, but only one of them (or rather the communication with only one of them) falls under the scope of protection of claim 1. The use of the term "a parcel mailbox

installation" in claims 2 and 3 thus broadens the subject matter and no longer makes clear what is covered by the scope of protection of claims 2 and 3.

6.3 Claim 5 refers back to itself. This is inadmissible.

6.4 Claim 5 introduces the terms "from the sending component" and "to the receiving component", using the definite article "the", as if the terms were already known. However, this is not the case, and therefore the claim does not clearly define what is meant by these new terms.

For the same reason, claims 6 and 7, which refer back to this unclear claim 5, are also unclear and inadmissible.

6.5 It is not clear in claim 6 how a status code confirms a function invocation or what is the meaning of such a confirmation. Maybe it would be better if the characterising part of claim 6 were reworded as follows: "components **acknowledged by sending back a status code**".

6.6 It might also have been better if the characterising part of claim 7 were reworded as follows: "within a **predetermined time period**".

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TRANSLATION OF ANNEXES TO THE
INTERNATIONAL PRELIMINARY EXAMINATION REPORT

In addition to the notifications of the users of the system, there also has to be communication between the parcel compartment systems and other components of the logistic system. This includes, for example, communication with data processing centers of the postal service provider that operates the parcel compartment systems.

The communication between one or more parcel compartment systems and at least one data processing center encompasses the transmission of information about certain events. These events include, for instance, drop-off and pick-up procedures by different groups of people. This communication also comprises the transmission of information that is needed for the operation of the machines. This includes, for example, filling states, user data, identification codes, compartment data and payment information.

In order to process information, process control computer systems with process control computers are known in which external events trigger a response by the process control computer. Examples of industrial applications for the use of process control computers are the control of machines, the automation of processes, the acquisition of operating data and quality control.

German Utility Model 201 03 564 U1, for example, discloses a system for delivering and receiving shipments which is particularly suitable for e-commerce. The system comprises several automatic delivery machines (ADM) in which shipments are deposited and from which they are picked up. The system

also comprises a LAMIS server-computer program for handling the operations of the system.

U.S. Pat. No. 5,051,914 describes a system for creating batches of mail for which a postal service provider grants a postage discount to a customer on the basis of certain criteria. For example, a discount is granted for presorted mailings. The system provides that a central data processing unit is connected to several customer stations at which users generate mailings. The data processing unit receives shipment information from the individual stations which the central unit then processes in such a way that mail batches fulfill the requirements of an envisaged postage discount when they are dropped off at a mail processing station.

U.S. Pat. No. 5,068,797 likewise discloses a system for optimizing the shipment of mail batches. In an embodiment of the system, it is possible, for example, that information is transmitted from the data processing unit to a processing station by e-mail. On the basis of the information, the mailings can be printed out and processed. In this case, the processing station is located near a mail depot so that the generated mailings can be dropped off directly at the depot. This eliminates the need for the transportation of mailings from a user to the processing station.

U.S. Pat. No. 5,972,401 discloses a system for the controlled drop-off of mailings in which a postage discount is likewise granted to a user under certain conditions. The system is supposed to bring about savings in terms of the

transportation and sorting procedures without entailing additional effort for the sender. Since the senders cannot at all times be aware of all of the requirements for receiving postage discounts, the mailing information is processed in a central data processing unit.

WO 96/20952 A2 discloses a system for pre-processing documents. Within the system, at an administrator, there is a central computer that has a storage medium comprising at least three different storage areas. The storage areas can each be used by registered database users in order to store templates, documents or responses.

The objective of the invention is to provide a method for data transmission between a parcel compartment system and at least one central data processing unit within a logistic system for the operation of one or more parcel compartment systems that ensures effective communication between the components. In this context, the logistic system should be able to comprise one or more transportation and delivery companies that have access to the compartments of the parcel compartment system and the logistic system should comprise one or more registered users.

Claims:

1. A method for data transmission between a parcel compartment system and at least one central data processing unit for the operation of one or more parcel compartment systems,

characterized in that

events at a parcel compartment system (20) are collected by means of a communication device (21) of the parcel compartment system (20) and the communication device (21) associates function messages with the events, whereby the function messages are combined into one single request and transmitted to the data processing unit (30), and the data processing unit (30) executes the functions corresponding to the events depending on the transportation or delivery company or user affected by the event and, if applicable, sends data back to the communication device (21).

2. The method according to Claim 1,

characterized in that

the events at the parcel compartment system (20) comprise depositing and/or picking-up shipments.

3. The method according to one or both of Claims 1 and 2,

characterized in that

the events at the parcel compartment system (20) comprise the expiration of time intervals.

4. The method according to one or more of the preceding Claims 1 to 3,

characterized in that

each request is provided with an unambiguous RequestID.

5. The method according to Claim 4,

characterized in that

the sending component sends the RequestID with the request to the receiving component, and the response to the appertaining request is sent back with this RequestID.

6. The method according to one or more of the preceding claims, characterized in that the receiving component confirms each function message with a status code that indicates the success or failure of the function message.

7. The method according to Claim 6, characterized in that the sending component repeats the function message if the receiving component has not sent back a status code within a certain period of time.